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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/994,197

11/26/2001

Thomas Reisinger

GR 99 P 1915

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7590

12/06/2006

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EXAMINER

KIM, KEVIN

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,197

Applicant(s)

REISINGER ET AL.

Examiner

Kevin Y. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1,2,10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeMense et al (US 6,384,710 cited previously) in view of Bourzeix (US 6,393,071 cited previously) and Abel (US 4,523,184).

Claims 1,11,12,13,16, 17, 20 and 21.

LeMense et al discloses a method and apparatus for carrying out simplex transmission of a data message modulating a carrier frequency in a radio access control system for a motor vehicle, comprising

wireless transmitting, in the radio access control system, to a receiver (18) in the motor vehicle (12), a data message containing an access code (see Fig.3) more than one time using at least two different carrier frequencies in temporal succession to increase immunity to interference, see col. 4, lines 16-63. Note that the frequencies are switched only within a predetermined channel comprising the two (or more) frequencies.

However, LeMense et al fails to teach changing the different frequencies by detuning, with at least one capacitor, an oscillating crystal of a carrier frequency generator. Instead, LeMense shows two different oscillators for transmitting the two different frequencies.

Referring to Fig. 2, Bourzeix teaches at least one capacitor (50) and an oscillating crystal or a detunable oscillator (44,48) to generate a plurality of frequencies, where switches are used to connect one of the capacitor to an oscillator. See col. 3, lines 1-10. This configuration is

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simpler than that use a plurality of oscillators for generating a plurality of carrier frequencies.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to use a bank of capacitors which is switchably coupled to an oscillator crystal, as taught by Bourzeix, to simply generate different carrier frequencies required in LeMense et al's radio access control system.

The claimed invention further recites the receiver bandwidth in the range of ± 300 ppm deviating from a nominal carrier frequency.

Abel teaches a receiver bandpass filter (71) tuned to a nominal transmission frequency and having a bandwidth of 10 MHz in order to accommodate transmission deviation of ± 2.5 MHz. See col. 7, lines 64-68 and col.9, lines 60-63.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to provide the reception of the carrier frequencies with a receiver bandwidth in the range of a predetermined extent deviating from the normal carrier frequencies for the purpose of receiving transmission even if the carrier frequencies slightly deviates from the nominal frequencies with variations in element characteristics.

Claim 2.

LeMense teaching using a different carrier frequency for each of two transmissions, as explained above. The transmission of more than two would have been obvious to ensure the message is received since more transmission increases the chances the receiver receives the message when interference is present.

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Regarding 10, LeMense et al discloses all the subject matter claimed but is silent on a tolerance range of carrier frequencies, it would have been obvious to one skilled in the art at the time the invention was made to set the tolerance of the carrier frequencies of LeMense et al reasonably low, i.e., "not more than $\pm 10\%$ " because it is a well established engineering principle to have a low tolerance in order to provide stable carriers.

Regarding claims 14 and 18 further calling for the switch to be "a program-controlled switch," since the different frequencies should be generated regularly in LeMense et al's device for repeated transmission of a message, the switches of Bourzeix, once used in LeMense et al's device would have been programmed to select a different capacitor one at a time.

Regarding claims 15 and 19, LeMense et al teaches using a plurality of frequencies, as explained above, implying that a frequency selecting circuit, i.e., "a carrier frequency control device" as claimed, would have been connected to the bank of capacitors, as taught by Bourzeix, for the purpose of switching one of them to the oscillating crystal.

4. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeMense et al in view of Bourzeix and Abel, as applied to claim 1 above, and in view of Shanbhag (US 6,314,125, previously cited).

Claims 3 and 6.

LeMense et al combination with Bourzeix discloses all the subject matter claimed except for "applying spreading to the data message by a predefined spread sequence." Shanbhag teaches that spreading data message is well known in the art for combining, transmitting and separation of message signals, i.e., an efficient utilization of frequencies without interference. Thus, it would have been obvious to one skilled in the art at the time the invention was made to

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apply a spreading code to the message of LeMense et al for the purpose of separating message signals without interference from other signals transmitted on the same frequencies.

Claims 4,5,7 and 8.

LeMense et al in combination with Bourzeix discloses all the subject matter claimed, as explained above in connection with claim 3, but is silent on specific carrier frequencies or data rates. Thus, it can not be ascertained whether or not the difference between the carrier frequencies is in an order of magnitude of a data rate of the data message as claimed in claim 4 or in a range between one quarter and two times a data rate of the data message as claimed in claim 5. However, since a selection of particular carrier frequencies and data rate of the data is a matter of design choice, it would have been obvious to one skilled in the art at the time the invention was made to select carrier frequencies and data rata that have the claimed relation between them particularly because applicant have failed to disclosed such relationship between carrier frequencies and data rate solves any stated problems or is for any particular purposes.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

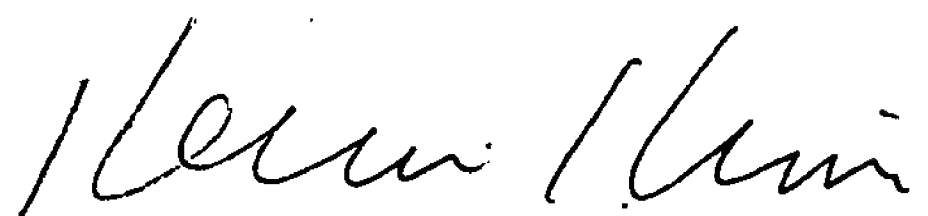
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 4, 2006

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KEVIN KIM
PRIMARY PATENT EXAMINER